



Patent Docket 871P3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of **APR 1 1996**  
Dan L. Eaton et al.  
**GROUP 1800**  
Serial No.: 08/223,263  
Filed: 4 April 1994  
For: HUMAN MPL LIGAND

Group Art Unit: 1812

Examiner: L. Spector

**CERTIFICATE OF MAILING**  
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on

April 18, 1996

*Duane Alexander Vick*  
Duane Alexander Vick

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#### INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

Applicants submit herewith patents, publications or other information (attached hereto and listed on the attached Form PTO-1449) of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56.

This Supplemental Information Disclosure Statement:

- (a)  accompanies the new patent application submitted herewith. 37 CFR §1.97(a).
- (b)  is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR§1.491.
- (c)  as far as is known to the undersigned, is filed before the mailing date of a first Office action on the merits.
- (d)  is filed after the first Office Action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee (\$220) set forth in 37 CFR §1.17(p) **or** a certification as specified in 37 CFR §1.97(e), as checked below. Should any fee be due, the U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 07-0630 in the amount of \$220.00 to cover the cost of this Supplemental Information Disclosure Statement. Any deficiency or overpayment should be charged or credited to this deposit account. A duplicate of this sheet is enclosed.

- (e)  is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by the fee (\$130) set forth in 37 CFR §1.17(i)(1) and a certification as specified in 37 CFR §1.97(e), as checked below. **This document is to be considered as a petition requesting consideration of the Supplemental Information Disclosure Statement.** The U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 07-0630 in the amount of \$130.00 to cover the cost of this Supplemental Information Disclosure Statement. Any deficiency or overpayment should be charged or credited to this deposit account. **A duplicate of this sheet is enclosed.**

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR §1.97(e) may need to be completed.] The undersigned certifies that:

- Each item of information contained in the Supplemental Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Supplemental Information Disclosure Statement.
- No item of information contained in this Supplemental Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Supplemental Information Disclosure Statement.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO-1449 (Modified).

A copy of the items on PTO-1449 is supplied herewith:

- each  none  only those listed below:

Those patent(s) or publication(s) which are marked with an asterisk (\*) in the attached PTO-1449 form are not supplied because they were previously cited by or submitted to the Office in a prior application Serial No. 08/196,689, filed 15 February 1994 and relied upon in this application for an earlier filing date under 35 USC §120.

A concise explanation of relevance of the items listed on PTO-1449 is:

- not given
- given for each listed item
- given for only non-English language listed item(s) [Required]
- in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

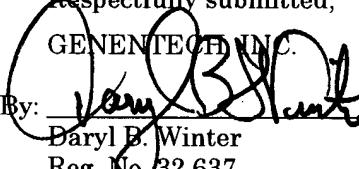
The Examiner is reminded that a "concise explanation of the relevance" of the submitted prior art "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention," MPEP §609.

While the information and references disclosed in this Supplemental Information Disclosure Statement may be "material" pursuant to 37 CFR §1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR §1.97(g), the filing of this Supplemental Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR §1.56(a) exists. It is submitted that the Supplemental Information Disclosure Statement is in compliance with 37 CFR §1.98 and MPEP §609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

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FORM PTO-1449		U.S. Dept. of Commerce Patent and Trademark Office		Atty Docket No. P0871P3	Serial No. 08/223,263
LIST OF DISCLOSURES CITED BY APPLICANT (Use several sheets if necessary)				Applicant Eaton et al.	
				Filing Date 04 Apr 1994	Group 1812

## U.S. PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date
	1	4,847,325	11.07.89	Shadie et al.	C08L	89/00	20.01.88
	2	4,894,440	16.01.90	Rosenberg, R.	C07K	3/28	17.09.86
	3	5,073,627	17.12.91	Curtis, et al.	C07K	13/00	14.08.90
	4	5,108,910	28.04.92	Curtis et al.	C12N	15/62	22.03.91
	5	5,128,449	07.07.92	McDonald et al.	C07K	15/14	05.07.88
	6	5,223,408	29.06.93	Goeddel et al.	C12P	21/02	11.07.91
	7	5,260,417	09.11.93	Grant et al.	C07K	15/00	02.04.90
	8	5,326,558	05.07.94	Turner et al.	C07K	15/00	29.06.90

## FOREIGN PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Country	Class	Subclass	Translation Yes	No
	9	WO 90/12877	01.11.90	PCT	C12N	15/62		
	10	WO 93/11247	10.06.93	PCT	C12N	15/57		

## OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)

11	Bartley et al., "Identification and Cloning of a Megakaryocyte Growth and Development Factor That is a Ligand for the Cytokine Receptor Mpl" <u>Cell</u> 77:1117-1124 (1994)
12	Bazan, J., "Structural Design and Molecular Evolution of a Cytokine Receptor Superfamily" <u>Proc. Natl. Acad. Sci. USA</u> 87:6934-6938 (1990)
13	Bowie et al., "Deciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions" <u>Science</u> 247:1306-1310 (1990)
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16	Foster et al., "Human Thrombopoietin: Gene Structure, cDNA Sequence, Expression, and Chromosomal Localization" <u>Proc. Natl. Acad. Sci. USA</u> 91(26):13023-13027 (1994)
17	Gearing et al., "Expression Cloning of a Receptor for Human Granulocyte-macrophage Colony-stimulating Factor" <u>EMBO Journal</u> 8(12):3667-3676 (1989)
18	Gerard et al., "The Core Polypeptide of Cystic Fibrosis Tracheal Mucin Contains a Tandem Repeat Structure" <u>J. Clin. Invest.</u> 86:1921-1927 (1990)
19	Gurney et al., "Genomic Structure, Chromosomal Localization, and Conserved Alternative Splice Forms of Thrombopoietin" <u>Blood</u> 85(4):981-988 (1995)
20	Hill et al., "Correlation of in vitro and in vivo Biological Activities During the Partial Purification of Thrombopoietin" <u>Exp. Hematol.</u> 20:354-360 (1992)
21	Hill et al., "The Effect of Partially Purified Thrombopoietin on Guinea Pig Megakaryocyte Ploidy in vitro" <u>Experimental Hematology</u> 17(8):903-907 (1989)
22	Hoffman, R., "Regulation of Megakaryocytopoiesis" <u>Blood</u> 74(4):1196-1212 (1989)

Examiner	Date Considered
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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<b>OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)</b>				
23	Hunt et al., "Purification and Biologic Characterization of Plasma-derived Megakaryocyte Growth and Development Factor" <u>Blood</u> 86(2):540-547 (1995)			
24	Kaushansky et al., "Promotion of Megakaryocyte Progenitor Expansion and Differentiation by the c-Mpl Ligand Thrombopoietin" <u>Nature</u> 369:568-571 (June 16, 1994)			
25	Kaushansky, K., "Thrombopoietin: The Primary Regulator of Platelet Production" <u>Blood</u> 86(2):419-431 (1995)			
26	Kellar et al., "Thrombopoietin-induced Stimulation of Megakaryocyte-enriched Bone Marrow Cultures" <u>Int. Congr. Thromb. Haem.</u> (Abstract P5-028/0668) 42(1):283 (1979)			
27	Kuter et al., "Appearance of a Megakaryocyte Growth-promoting Activity, Megapoietin, During Acute Thrombocytopenia in the Rabbit" <u>Blood</u> 84(5):1464-1472 (1994)			
28	Lok et al., "Cloning and Expression of Murine Thrombopoietin cDNA and Stimulation of Platelet Production in vivo" <u>Nature</u> 369:565-568 (June 16, 1994)			
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33	McDonald et al., "Studies on the Purification of Thrombopoietin from Kidney Cell Culture Medium" <u>Journal of Laboratory and Clinical Medicine</u> 106(2):162-174 (1985)			
34	McDonald, T., "Thrombopoietin: Its Biology, Purification, and Characterization" <u>Experimental Hematology</u> 16(3):201-205 (1988)			
35	Metcalf, D., "Thrombopoietin - At Last" <u>Nature</u> 369:519-520 (1994)			
36	Methia et al., "Oligodeoxynucleotides Antisense to the Proto-oncogene c-Mpl Specifically Inhibit in vitro Megakaryocytopoiesis" <u>Blood</u> 82(5):1395-1401 (1993)			
37	Mignotte et al., "Structure and Transcription of the Human c-Mpl Gene (MPL)" <u>Genomics</u> 20:5-12 (1994)			
38	Nicola et al., "Subunit Promiscuity Among Hemopoietic Growth Factor Receptors" <u>Cell</u> 67:1-4 (1991)			
39	Skoda et al., "Murine c-Mpl: a Member of the Hematopoietic Growth Factor Receptor Superfamily That Transduces a Proliferative Signal" <u>EMBO Journal</u> 12(7):2645-2653 (1993)			
40	Sohma et al., "Molecular Cloning and Chromosomal Localization of the Human Thrombopoietin Gene" <u>FEBS Letters</u> 353(1):57-61 (1994)			
41	Souyri et al., "A Putative Truncated Cytokine Receptor Gene Transduced by the Myeloproliferative Leukemia Virus Immortalizes Hematopoietic Progenitors" <u>Cell</u> 63:1137-1147 (1990)			
42	Vigou et al., "Characterization of the Murine Mpl Proto-oncogene, a Member of the Hematopoietic Cytokine Receptor Family: Molecular Cloning, Chromosomal Location and Evidence for a Function in Cell Growth" <u>Oncogene</u> 8:2607-2615 (1993)			
Examiner			Date Considered	
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